CLAIMS

1. A pharmaceutical composition for topical administration, including, as the pharmaceutically active component,

at least 5% by weight, based on the total weight of the composition of a piperidinopyrimidine derivative or a pharmaceutically acceptable salt thereof;

an acid in an amount to substantially completely solubilise the piperidinopyrimidine derivative or a pharmaceutically acceptable salt thereof

a solvent composition including a solvent selected from water and/or a lower alcohol and a co-solvent selected from one or more of the group consisting of aromatic and polyhydric alcohols; wherein when the co-solvent includes propylene glycol, it is present in an amount of less than approximately 10% by weight.

2. A pharmaceutical composition according to Claim 1, wherein the acid is added in an amount sufficient to provide an apparent pH to the composition of approximately 7.0 or less.

3. A pharmaceutical composition according to Claim 1, wherein the pharmaceutically active component is present in an amount of from approximately 5 to 25% by weight, based on the total weight of the pharmaceutical composition.

4. A pharmaceutical composition according to Claim 3, wherein the pharmaceutically active component is present in an amount of approximately 7.5 to 12% by weight, based on the total weight of the pharmaceutical composition.

5. A pharmaceutical composition according to Claim 1, wherein the pharmaceutically active component is minoxidil or a salt thereof.

6. A pharmaceutical composition according to Claim 2, wherein the acid provides to the composition an apparent pH in the range of approximately 5.0 to 7.0.

7. A pharmaceutical composition according to Claim 2, wherein the acid is a

mineral or organic acid.

8. A pharmaceutical composition according to Claim 7, wherein the acid includes acetic or lactic acid.

9. A pharmaceutical composition according to Claim 1, wherein the solvent composition includes water and ethanol in a range of approximately 1:1 to 1:3 by volume.

10. A pharmaceutical composition according to Claim 1, wherein the co-solvent includes benzyl alcohol.

11. A pharmaceutical composition according to Claim 1, wherein the solvent composition system includes water and benzyl alcohol wherein the benzyl alcohol is in an amount of approximately 40 to 100% by weight based on the total weight of the co-solvent system.

12. A pharmaceutical composition according to Claim 1, wherein the water is present in an amount no greater than approximately 60% by weight based on the total weight of the co-solvent system.

13. A pharmaceutical composition according to Claim 1, wherein the co-solvent includes an alkylene glycol.

14. A pharmaceutical composition according to Claim 13, wherein the alkylene glycol is selected from one or more of the group consisting of glycerol, 1,3-butylene or propylene glycol.

15. A pharmaceutical composition according to Claim 1, wherein the acid is present at a level that provides at least 0.01 Normal acid.

16. A pharmaceutical composition according to Claim 1, wherein the acid is present in an amount equal to or greater than the amount of the piperidinopyrimidine derivative in Normal amounts.

17. A pharmaceutical composition according to Claim 1, wherein the solvent system includes water and ethanol in a range of approximately 9:1 to 1:9 by volume.

18. A pharmaceutical composition according to Claim 5, wherein the pharmaceutically active component is a minoxidil salt.

19. A pharmaceutical composition according to Claim 18, wherein the minoxidil salt is a minoxidil acetate or lactate salt.

20. A pharmaceutical composition according to Claim 1, including

approximately 5 to 12% by weight, based on the total weight of the composition, of a minoxidil or a minoxidil acid salt;

approximately 88 to 95% by weight of a solvent composition including

approximately 10 to 70% by weight of ethanol,

approximately 2.5 to 85% by weight of benzyl alcohol;

and less than 10% by weight, propylene glycol.

21. A method for the treatment of hair loss and related indications in humans, which method includes

providing

a pharmaceutical composition for topical administration, including, as the pharmaceutically active component,

at least 5% by weight, based on the total weight of the composition of a piperidinopyrimidine derivative or a pharmaceutically acceptable salt thereof;

an acid in an amount to substantially completely solubilise the piperidinopyrimidine derivative or a pharmaceutically acceptable salt thereof;

a solvent composition including a solvent selected from water and/or a lower alcohol and a co-solvent selected from one or more of the group consisting of aromatic and polyhydric alcohols; wherein when the co-solvent includes propylene glycol, it is present in an amount of less than approximately 10% by weight; and

applying topically to the human scalp a therapeutically or prophylactically

effective amount of the pharmaceutical composition.

22. A method according to Claim 21, wherein the pharmaceutically active component includes minoxidil or a minoxidil salt.

23. A method according to Claim 22, wherein the minoxidil salt is a minoxidil acetate or lactate salt.

24. A method according to Claim 21, wherein the pharmaceutical composition includes

approximately 5 to 12% by weight, based on the total weight of the composition, of a minoxidil or a minoxidil salt;

approximately 88 to 95% by weight of a solvent composition including

approximately 10 to 70% by weight of ethanol,

approximately 2.5 to 85% by weight of benzyl alcohol;

and less than 10% by weight, propylene glycol.

25. A pharmaceutical composition according to Claim 1, substantially as herein before described with reference to any one of the examples.